

Nevada State Immunization Program

Mandatory Fields for Health Level 7 (HL7) VXU Messages

(VXU = Unsolicited Vaccination Record Update)



In preparation for HL7 pilot testing, the HL7 fields were reviewed to determine those that must have a value in order for our system to accept a VXU message. The mandatory fields are:

MSH Segment

1. Field Separator*

- Registry expects that incoming messages will use the pipe character (“|”) as the field separator for all messages.

2. Encoding Characters*

- Registry expects that incoming messages will contain the recommended value of “^~\&” in this field.

3. Message Type*

- Registry expects this to always be “VXU^V04” for this type of message.
- Registry will ignore any value in the Message Structure component of this field.
- If an invalid message type is included, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.

4. Message Control ID*

- Should be a unique ID (within each system sending messages to the Registry) and is generated by the system sending the message.
- Registry will archive this in its message log.
- Registry will include the ID provided here in the “Message Control ID” field of the MSA segment of the response message.

5. Processing ID*

- Registry will use the indicated system to generate the results for the query. Valid values are represented in table “HL70103”.
- Registry will ignore the contents of the second component as it does not impact how the Registry will process the request.

6. Version ID*

- Registry expects all messages to use version 2.3.1.
- If an unsupported version is indicated, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
- NOTE: Additional versions may be made available as the need arises. Please contact the NSHD Immunization Program to discuss any specific needs for other versions.

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PID Segment

1. Patient Identifier List*

- Registry will accept values for the following types of identifiers:
 - MA (Medicaid Number)
 - MC (Medicare Number)
 - MR (Medical Record Number)
 - PI (Patient Internal Identifier) – will be stored for inclusion in future VXR and VXX messages
 - SR (State Registry ID) *(This field must only contain numeric digits. If any non-numeric characters are found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.)*
 - SS (Social Security Number) *(This field must include 9 digits after the system removes all non-numeric characters such as a dash (-), forward slash (/), spaces, etc. If 9 digits are not found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.)*
 - Registry will ignore any other types of identifiers

2. Patient Name*

- Registry expects the patient's full name in this field with a Name Type component of "L".
- Registry will not update the patient's name in its instance of the patient's record if that record was received from the Vital Statistics system. (for the future linkage)
- NOTE: Name values will be parsed by the Registry to ensure a standardized format prior to searching for or updating a patient's record. This may result in slight variations of names submitted versus names returned. (for future 2-way exchanges)

RXA Segment

1. Give Sub-ID Counter*

- Registry expects this value to always be "0".
- Registry will ignore any other value in this field.

2. Date/Time Start of Administration*

- Registry will only use the date portion of any value in this field.
- Registry will ignore any time-related values in this field.
- Registry will ignore a record if a valid date is not supplied. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.

3. Administered Code*

- Registry assumes the first triplet will always contain the CVX code for the vaccine.
- Registry assumes the second triplet, if included, will always contain the CPT code for the vaccine.

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- Registry will ignore any record that does not have a valid code for the vaccine. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.

4. Administered Amount*

- Registry expects a valid amount in this field.
- Registry expects a value of "999" in this field for a refused vaccine.
- Registry will ignore any data in this field that is not a valid amount. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.

5. Administered Units*

- Registry expects a value of "ML^^ISO+" in this field indicating the administered amount is measured in milliliters.
- Registry will ignore any other value in this field.

RXR Segment

1. Route*

- Registry expects the indicated value to have a value of "HL70162" in the coding system component.
- Registry will ignore any data in this field that is not a valid route. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.

2. Site*

- Registry expects the indicated value to have a value of "HL70163" in the coding system component.
- Registry will ignore any data in this field that is not a valid race. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.

Additional Information for VXU Messages

The Registry will attempt to match the patient in the VXU message with a patient record in the Registry using the following guidelines.

- If a State Registry ID is supplied in the incoming message and that record is not marked for deletion in the Registry, then the matching record (based only on patient ID) will be updated.
- If no State Registry ID is supplied in the incoming message, the following guidelines will be applied:
 - If a DOB is supplied, the Registry will attempt to find a matching record as follows:
 - First name supplied matches the patient's first name and the Last name supplied is similar to the patient's last name OR the Last name supplied matches the patient's last name and the First name supplied is similar to the patient's first name.

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- The DOB supplied matches the patient's DOB. (Patient's without a DOB in the Registry cannot be matched to an incoming VXU message except through the State Registry ID parameter.)
- If more than one record exists in the set of potential matching records, the following filters will be applied in the order indicated until either only a single record remains or until applying the filter would result in no matches remaining:
 - SSN
 - Gender
 - Medical Record Number
 - Middle Name/Initial
 - Patient's Alias Name
 - Mother's Maiden Name
 - Mother's First and Last Name
 - Birth State
- If a single record remains in the set of potential matching records, it will be updated.
- If multiple records or no records remain in the set of potential matching records, the patient in the incoming VXU message will be added to the Registry as a new record.
 - This may lead to a duplicate record being created in the Registry. When this occurs, the de-duplication features of the Registry can be used to combine the records into a single instance again.

For any update request, if there is a matching record that is marked for deletion in the Registry, it will not be considered as a potential matching record.

By allowing a provider to search the Registry by State Registry ID number, they will have a mechanism for updating any field about a patient. However, they are restricted from doing this until they have previously searched for a patient and have uniquely matched the patient record from the Registry with a record in their local system.

(NOTE: The above description is not intended to imply anything regarding about the technical design of the queries used to locate matching records in the Registry. The goal is only to describe the general concept of how the searches will work.)

- ORU Messages (Unsolicited Transmission of an Observation) will be accepted for Adverse Reaction information, but are not mandatory. Any ORU data submitted will NOT be forwarded to VAERS.

Bolded items indicates a field suggested mandatory by CDC guidelines.

(*) Indicates a mandatory HL7 field required by the Nevada State Health Division.